

WHAT IS CLAIMED IS:

1. A method of screening for a compound that modulates viral assembly and maturation comprising the steps of:

5 maintaining viral structural protein in a soluble form;
triggering assembly of said viral structural protein;
contacting said viral structural protein with a candidate compound or a control compound that does not inhibit viral assembly; and

10 monitoring viral assembly, wherein an increase or decrease of viral assembly in the presence of said candidate compound compared to control compound indicates said candidate compound promotes or inhibits viral assembly respectively.

15 2. The method of claim 1, wherein said viral assembly and maturation is HIV-1 assembly and maturation.

20 3. The method of claim 2, wherein said viral structural protein is selected from the group consisting of matrix

protein, capsid protein, nucleocapsid protein and gag protein of HIV-1.

5 4. The method of claim 1, wherein said viral structural protein is maintained in a soluble form through the use of perturbant.

10 5. The method of claim 4, wherein said perturbant is NaCl.

15 6. The method of claim 5, wherein said NaCl is in a concentration of from about 1 M to about 4 M.

 7. The method of claim 4, wherein said perturbant is GuHCl.

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8. The method of claim 7, wherein said GuHCl is in a concentration of from about 1 M to about 6M.

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9. The method of claim 1, wherein said assembly of viral protein is triggered by rapid removal of pertubant.

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10. The method of claim 9, wherein said rapid removal of pertubant is by dilution.

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11. The method of claim 3, wherein said candidate compound is selected from the group consisting of protein, peptide derived from the HIV-1 Gag polyprotein and a non-peptide small molecule.

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12. The method of claim 1, wherein said monitoring of viral assembly is by a method selected from the group consisting of measuring turbidity, measuring fluorescence and physical separation of the polymerized viral protein.